PHA Findings

ABU	Plant	Revalidation	Start Date	End Date	Facilitator	Scribe
Cracking	#3 H2S PLANT/SWC	3rd Revalidation			Tim Storrs - Facilitator	

Core Team Members / Role

Mark Elizalde - Operations; Jimmy Lam, Trisha Padilla, Ashley Hamilton-Ross - Process Enginering; Jackie Drach, Bill Hill - Designs Engineering

Close Out Meeting Participants / Role

Rick Smith - FCC OA; Scott Wooten - Cracking RBL Martin Tirona - Designs Engineering Al Toweill - Process Engineering

Additional Participants / Role

Entire PHA Report

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*** Further discussion about any portion of the report and its contents should be directed to the facilitator or any of the team members listed**

Comments

Reviewed By	Date	Feedback/Comments

Section No	Section Description
10	P-220/P-220A DEA pumps through E-200A/B.

Item	WhatIf	Deviation	A/C	SOE	RR	ABU Proposal	Resolution	Owner	Due By	Status
10.16.1.1	16473	Miscellaneous	Concern is that there is no local indication of P-220/A seal flush temperature or pressure. Consider adding some local indication of P-	E	6	Will add local indication of seal flush pressure at P-220/A	Passport work request issued 04/24/2008. P-220 is work request #28129448 Comp P-220A is work request #28129449 Comp This work	Smith, Richard A.	8/30/2008	Completed

	220/A seal flush pressure and/or temperature	is now complete 10/23/2008

Section No	Section Description
15	C-241 OVHD outlet thru E-241 to V-244 inlet and V-244 overhead outlet through PCV-244B to V-100

Item	WhatIf	Deviation	A/C	SOE	RR	ABU Proposal	Resolution	Owner	Due By	Status
15.1.1.1	16470	No Flow	Concern is that the instruments in the C-241 overhead system noted in the safeguards are not reliable. Determine the causes for the unreliable operation of these instruments and repair/replace as needed.	S	9	This recommendation is declined. The instruments in this service may require repair more frequently than in other systems. However, the instrumentats are repaired as needed.	This recommendation is declined. The instruments in this service may require repair more frequently than in other systems. However, the instrumentats are repaired as needed.	Smith, Richard A.	2/11/2009	Declined
15.1.1.1	16469	No Flow	Concern is that the P&ID D320263-11 shows the cooling water PSV 232 is set for 110 PSI and the design pressure of E-241 tubes is 65 psi. Verify that the pressure setting for the thermal relief PSVs is correct	S	9	The Designs Engineering group will research the correct PSV 232 setting, issue any work orders necessary if the setting needs to be changed and update the P&ID and/or other documentation as required by the findings.	The design pressure of E-241 tubes is 135 psig per the SIS. The P&ID is being updated through MOC #20523 to reflect the correct pressure. PSV 232 is set correctly at 110 psig.	Tirona, Martin	12/31/2010	Completed
15.12.1.1	16471	Contamination	Concern is that there is frequent plugging in the V244 overhead system and the instrumentatiion is unreliable. Consider repairing the existing steam tracing and adding steam tracing where needed in order to provide reliable operation.	A	6	Will repair the existing steam tracing and add steam tracing where needed in order to provide reliable operation.	Steam tracing being worked on routine maintenance schedule. Tracing and insulation complete. RAS	Smith, Richard A.	8/30/2008	Completed

Section No	Section Description
18	Global Issues and Wrap-up Discussion

Item	WhatIf	Deviation	A/C	SOE	RR	ABU Proposal	Resolution	Owner	Due By	Status
18.1.1.1	16452	Startup/Shutdown	Concern is that the equipment Minimum Pressurizing Temperatures (MPT) are not included in the current startup procedures. Consider adding the MPT information to the startup procedures	S	5	Review the MPT information and determine if it should be included in the operating manuals in some form by 4/12/2008. If the material is to be added to the EOM, contact Tim Storrs (2-2406 or tsfx) to set a new target completion date for this recommendation	This information will be incorporated into the startup procedures. Highest MPT in 3H2S is 52 F. Markup is in place with the FCC Trainer and it will be incorporated into the procedure. Update - 4/14/08 - will re-assign to DED and extend due date to see if MPTs can be recalculated to a more reasonable wintertime temperature of 20 F. Update - 5/28/08 - DED review of MPT completed and	Tirona, Martin	6/12/2008	Completed

						current MPTs for equipment are valid. Operating pressures are below allowable at MPT.			
18.3.1.1 16454	General Issues	Review the plant piping for conformance with Best Practice standard. Review the inspection frequency for conformance with Best Practice recommendations Consider upgrading piping as indicated by review findings	S	6	Review Best Practice piping and inspection recommendations and make specific recommendations for any changes required to piping materials or inspection frequency and review recommendation with Rick Smith by 4/12/2008. Implement the changes at the next scheduled shutdown or by 2/12/2009 if a plant shutdown is not required.	Reviewed amine piping at No. 3 H2S for conformance with Best Practice Standard. Recommendation forwarded to Rick Smith on April 14, 2008. All rich amine piping were found to exceed Best Practice guideline for velocity. However, due to the low to moderate corrosion rates found, it is not justified to upgrade the piping to meet Best Practice guideline. The only recommendation is to stress-relief all amine piping when piping replacement is necessary.	Lam, Jimmy	2/12/2009	Completed
18.3.2.1 16455	General Issues	Review the piping classifications for all critical lines in #3 H2S and SWC and update the P&IDs with the necessary information	S	6	Review the piping classifications for all critical lines in #3 H2S and SWC and update the P&IDs with the necessary information	EWOs will be reviewed to verify existing pipe class and will be updated if needed. Existing piping was designed to handle design pressure and design temperature of the plant.	Tirona, Martin	2/12/2009	Completed
18.3.3.1 16456	General Issues	Update P&ID D320358-11 to show E-230 correctly	S	6	Update P&ID D320358-11 to show E-230 correctly. See Mark Elizalde for more details.	No updates required. Checked with Mark and E-230 is correctly labelled as abandoned in place in the P&ID.	Tirona, Martin	8/12/2009	Completed
18.3.4.1 16457	General Issues	Update P&ID D320260-11 to show block valve on V-240 overhead line to relief as CSO	S	6	Update P&ID D320260-11 to show block valve on V-240 overhead line to relief as CSO	Updated P&ID and sent to Drafting.	Tirona, Martin	5/12/2009	Completed

Section No	Section Description
4	Lean DEA from E-200A/B to C-200/C-210 inlets.

Item	WhatIf	Deviation	A/C	SOE	RR	ABU Proposal	Resolution	Owner	Due By	Status
4.6.1.1	16458	More Temperature	Revise P&ID D320356-13 to show correct routing of outlet line from TV-200	E	7	Revise P&ID D320356-13 to show correct routing of outlet line from TV-200. See Mark Elizalde for more info.	Spoke to Mark and reviewed P&ID D320356-13. No corrections were required on the P&ID.	Tirona, Martin	5/12/2009	Completed
4.6.2.1	16459	More Temperature	Concern is that the P&ID D320356-13 shows cooling water PSVs FC-217 and FC-208 are set for 75 PSI and the design pressure of E-200A/B tubes is 65 psi. Verify that the pressure setting for the thermal relief PSVs is correct	E	10	Verify that the pressure setting for the thermal relief PSVs FC-217 and FC-208 is correct, reset if required and update the P&ID and/or other documentation as needed.	The PSV is set to the correct pressure of 75 psig. No change is required.	Tirona, Martin	12/31/2010	Completed

Section No	Section Description
6	Rich DEA from V-220 thru E-221 to C-220 inlet.

Item	WhatIf	Deviation	A/C	SOE	RR	ABU Proposal	Resolution	Owner	Due By	Status
6.12.1.1	16474	Leak/Rupture	Confirm the status of MOC 15929 to upgrade the V-220 to C-220 rich DEA piping to GF1 (304SS). This will reduce the lilelihood of the event to a 4	S	5	304SS piping per MOC 15929 will be installed at the next scheduled shutdown, currently scheduled for 1Q2010	The status of this MOC is still active. Waiting on #3H2S to be O/S long enough for this pipe spool to be replaced. Next scheduled FCC turnaround is 1Q/10.	Smith, Richard A.	3/31/2010	Completed

Section No	Section Description
8	H2S Product from C-220 outlet thru E-223 to C-230 inlet

Item	WhatIf	Deviation	A/C	SOE	RR	ABU Proposal	Resolution	Owner	Due By	Status
8.6.1.1	16463	More Temperature	Concern is that E-223 must be backwashed every shift to maintain adequate performance due to low velocity in the tubes. Consider modifications to the cooling water supply or the exchanger to improve E-223 performance	E	8	The solution to this problem is to relocate the exchanger to a lower elevation. This recommendation will be declined since the hazard to personnel and equipment is at an acceptable level	The solution to this problem is to relocate the exchanger to a lower elevation. This recommendation will be declined since the hazard to personnel and equipment is at an acceptable level	Smith, Richard A.		Declined
8.6.2.1	16464	More Temperature	Concern is that P&ID D320358-11 shows the cooling water PSV FC-5033 is set for 75 PSI and the design pressure of E-223 tubes is 65 psi. Tag on the valve in field indicates it is set for 85 psi Verify that the pressure setting for the thermal relief PSV is correct	E	10	Verify the correct pressure setting for the thermal relief PSV FC-5033, reset if required and update P&ID and/or other documentation as needed.	The PSV is set to the correct pressure of 75 psig. No change is required.	Tirona, Martin	12/31/2010	Completed

Section No	Section Description
9	H2S Product from C-230 outlet to H2S Manifold Valves

Item	WhatIf	Deviation	A/C	SOE	RR	ABU Proposal	Resolution	Owner	Due By	Status
9.6.1.1	16472	More Temperature	Concern is that P&ID D320358-11 shows the cooling water PSV FC-207 is set for 75 PSI and the E-231 tubes are rated for 600 psi. Verify that the thermal relief PSV is necessary and set for the correct pressure	A	9	Verify that the thermal relief PSV is necessary and set for the correct pressure. Reset or replace if appropriate and update P&ID and/or other documentation as needed	All PSVs on the cooling water system are set at 75 psig. DED has no concern with having PSV set at lower pressure than design pressure. Thermal safety is necessary to protect exchanger. Set points can be raised as needed based on operating requirements. No action required.	Tirona, Martin	4/12/2008	Completed

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